

Stat & Data Analysis: Core Assessment 3 practice 1

- 1) We want to test the effectiveness of a cholesterol reducing drug on patients with high cholesterol. We want to test the new drug versus the currently used drug. We have 30 people available for this experiment: 10 men and 20 women, all with high cholesterol. We will measure the decrease in their cholesterol level after 6 weeks on the drug.

(a) Identify the following (1 pt)

i. Explanatory Variable

ii. Response Variable

iii. Treatments

iv. Individuals/Subjects

changing - general
measuring
specific
things people #, what/who are

(b) Create a block design experiment. Draw your design below. (2 pts)

- (c) The 10 Men are given numbers 01 – 10. Using the section of the Table of Random digits given below, randomly assign the 10 men to the treatment groups you described in your design in part (b). Show your process clearly. (1 pt)

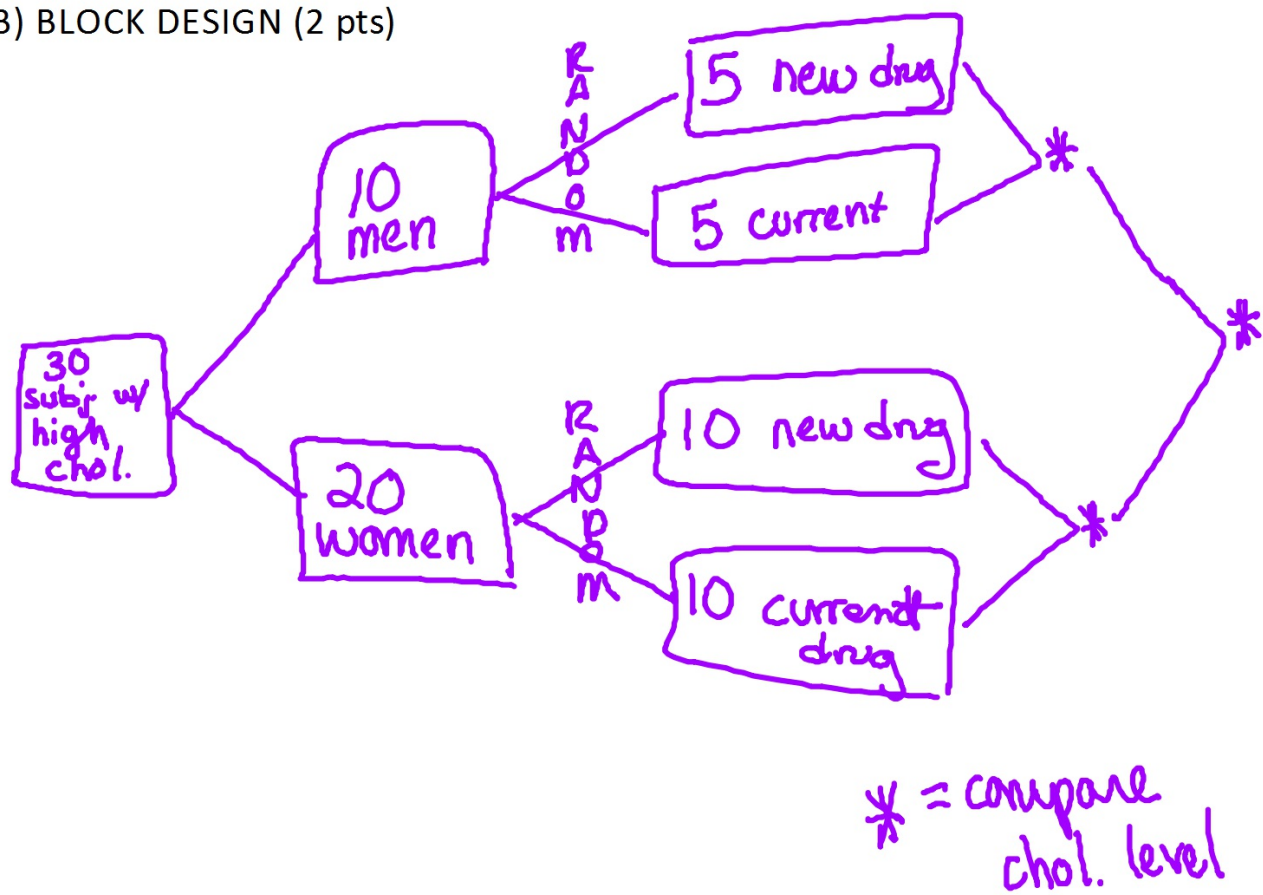
07081 52210 76043 98231 86028 90167 34014 12708 82905 10395 03040 89274

(a) Identify the following (1 pt)

- i. Explanatory Variable
- ii. Response Variable
- iii. Treatments
- iv. Individuals/Subjects

- i) medication / drug / pill
- ii) cholesterol level
- iii) new & current drug
- iv) Subjects, 30 people w/ high chol.

(B) BLOCK DESIGN (2 pts)



(c) The 10 Men are given numbers 01 – 10. Using the section of the Table of Random digits given below, randomly assign the 10 men to the treatment groups you described in your design in part (b). Show your process clearly. (1 pt)

07081 52210 76048 98281 86028 90167 34014 12708 82905 10395 03040 89274

- Read TRD every 2 #'s.
- Ignore #00, 11-99, & repeats
- First 5 #'s go to new drug.
All others go to current drug.

New: 07, 08, 10, 04, 02

Current: 01, 03, 05, 06, 09

Stat & Data Analysis: Core Assessment 3 practice 2

2) An investigator wants to study the effects of two different fertilizers on plant growth (call them A and B). There are 40 plots available to test the fertilizers on: 20 rose plants and 20 hydrangea plants. The investigator will measure the amount of growth by the plants after 3 months.

(a) Identify the following (1 pt)

- i. Explanatory Variable
- ii. Response Variable
- iii. Treatments
- iv. Individuals/Subjects

(b) Create a block design experiment. Draw your design below. (2 pts)

(c) The 20 rose plants are given numbers 01 – 20. Using the section of the Table of Random digits given below, randomly assign the 20 rose plants to the treatment groups you described in your design in part (b). Show your process clearly. (1 pt)

10034 56809 78900 12034 22311 34565 08157 12708 26281 71623 93725 61207

(a) Identify the following (1 pt)

- i. Explanatory Variable
- ii. Response Variable
- iii. Treatments
- iv. Individuals/Subjects

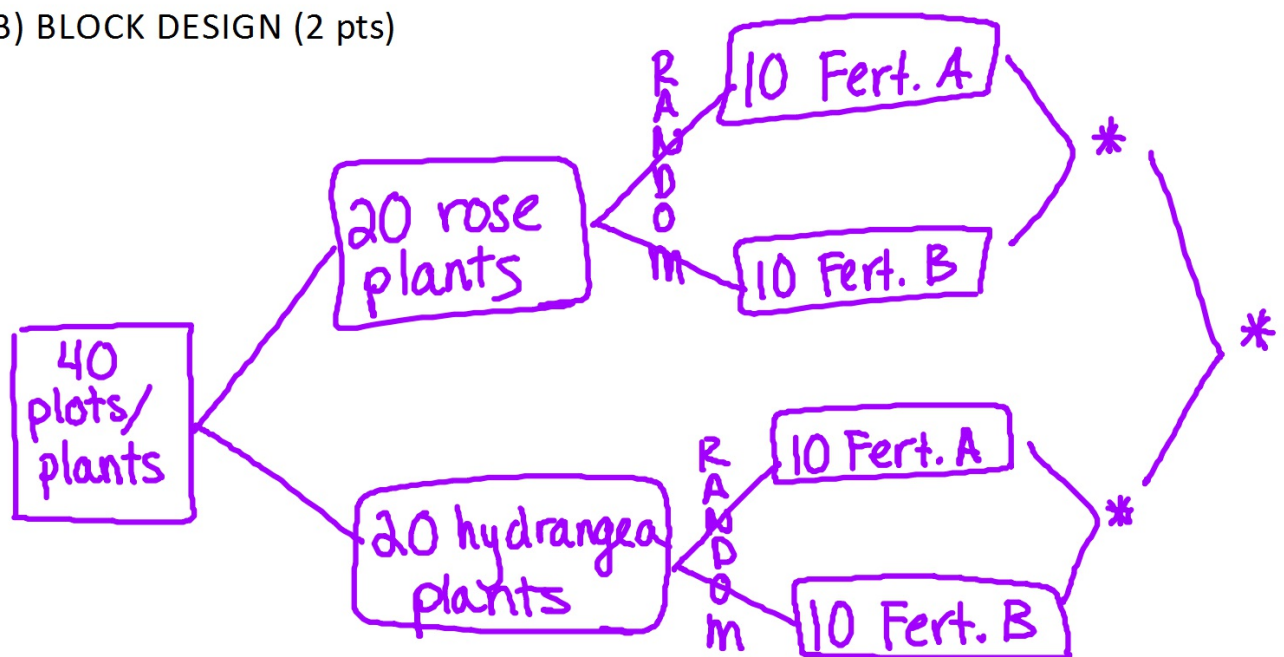
i) Fertilizer

ii) amount of growth

iii) Fertilizer A + B

iv) Individuals, 40 plots/plants

(B) BLOCK DESIGN (2 pts)



* = compare plant growth

(c) The 20 rose plants are given numbers 01 – 20. Using the section of the Table of Random digits given below, randomly assign the 20 rose plants to the treatment groups you described in your design in part (b). Show your process clearly. (1 pt)

10034 56809 78900 12034 22311 34555 08157 12708 26281 71623 93725 61207

- Read across TRD every 2 digits
- Ignore 00, 21-99, repeats
- First 10 #'s go to Fert A, rest to B.

A 10, 03, 09, 01, 20, 13, 08, 15, 17, 16

B 02, 04, 05, 06, 07, 11, 12, 14, 18, 19